

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

| | |
|---|---|
| Date of mailing (day/month/year) 28 May 2001 (28.05.01) | |
| International application No. PCT/SE00/01714 | Applicant's or agent's file reference 99 P 2017 P |
| International filing date (day/month/year) 06 September 2000 (06.09.00) | Priority date (day/month/year) 09 September 1999 (09.09.99) |
| Applicant HÖIJER, Carl, Johan et al | |

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
 06 April 2001 (06.04.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

| | |
|---|---|
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35 | Authorized officer J. Leitao Telephone No.: (41-22) 338.83.38 |
|---|---|

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | | |
|---|--|---|---|
| Applicant's or agent's file reference 99 P 2017 P | <table style="width: 100%;"> <tr> <td style="width: 35%; text-align: center;">FOR FURTHER ACTION</td> <td style="width: 65%;">see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</td> </tr> </table> | FOR FURTHER ACTION | see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. |
| FOR FURTHER ACTION | see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. | | |
| International application No. PCT/SE 00/01714 | <table style="width: 100%;"> <tr> <td style="width: 60%;">International filing date (<i>day/month/year</i>) 6 Sept 2000</td> <td style="width: 40%;">(Earliest) Priority Date (<i>day/month/year</i>) 9 Sept 1999</td> </tr> </table> | International filing date (<i>day/month/year</i>) 6 Sept 2000 | (Earliest) Priority Date (<i>day/month/year</i>) 9 Sept 1999 |
| International filing date (<i>day/month/year</i>) 6 Sept 2000 | (Earliest) Priority Date (<i>day/month/year</i>) 9 Sept 1999 | | |
| Applicant St. Jude Medical AB et al. | | | |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (See Box II).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No. 1

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE 00/01714

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: A61N 1/365 // A 61 N 1/368

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: A61N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| X | WO 9625977 A1 (MEDTRONIC, INC.), 29 August 1996 (29.08.96), page 8, line 15 - line 17; page 10, line 27 - line 31; page 11, line 26 - page 12, line 6 -- | 1-13 |
| D,A | US 4702253 A (T.A. NAPPHOLZ ET AL.), 27 October 1987 (27.10.87), abstract -- | 1-13 |
| D,A | US 5534016 A (W. BOUTE), 9 July 1996 (09.07.96), abstract -- | 1-13 |
| D,A | US 5507782 A (R.S. KIEVAL ET AL.), 16 April 1996 (16.04.96), abstract -- | 1-13 |

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

5 December 2000

Date of mailing of the international search report

07 -12- 2000

Name and mailing address of the ISA/
Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM
Facsimile No. +46 8 666 02 86

Authorized officer

Nikolaj Hautaviita/AE
Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 00/01714

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| D,A | EP 0841075 A2 (VIATRON MEDICAL B.V.), 13 May 1998 (13.05.98), abstract ----- | 1-13 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

02/11/00

International application No.

PCT/SE 00/01714

| Patent document cited in search report | | | Publication date | Patent family member(s) | | Publication date |
|---|---------|----|---------------------|----------------------------|--------------|---------------------|
| WO | 9625977 | A1 | 29/08/96 | AU | 4966796 A | 11/09/96 |
| | | | | CA | 2210333 A | 29/08/96 |
| | | | | DE | 69600596 D,T | 20/05/99 |
| | | | | EP | 0812223 A,B | 17/12/97 |
| | | | | SE | 0812223 T3 | |
| | | | | JP | 11500042 T | 06/01/99 |
| | | | | US | 5626620 A | 06/05/97 |
| | | | | US | 5749906 A | 12/05/98 |
| ----- | | | | | | |
| US | 4702253 | A | 27/10/87 | NONE | | |
| ----- | | | | | | |
| US | 5534016 | A | 09/07/96 | EP | 0728497 A | 28/08/96 |
| | | | | JP | 8243177 A | 24/09/96 |
| ----- | | | | | | |
| US | 5507782 | A | 16/04/96 | AU | 681942 B | 11/09/97 |
| | | | | AU | 1743195 A | 03/10/95 |
| | | | | DE | 69510448 D,T | 24/02/00 |
| | | | | EP | 0751804 A,B | 08/01/97 |
| | | | | SE | 0751804 T3 | |
| | | | | JP | 2804373 B | 24/09/98 |
| | | | | JP | 9504982 T | 20/05/97 |
| | | | | WO | 9524944 A | 21/09/95 |
| ----- | | | | | | |
| EP | 0841075 | A2 | 13/05/98 | US | 5713930 A | 03/02/98 |

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| | | |
|--|---|---|
| Applicant's or agent's file reference 99 P 2017 P | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/SE00/01714 | International filing date (day/month/year) 06/09/2000 | Priority date (day/month/year) 09/09/1999 |
| International Patent Classification (IPC) or national classification and IPC A61N1/365 | | |
| Applicant St. JUDE MEDICAL AB et al | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

| | |
|---|---|
| Date of submission of the demand 06/04/2001 | Date of completion of this report 04.12.2001 |
| Name and mailing address of the international preliminary examining authority: <div style="display: flex; align-items: center;"> <div> European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 </div> </div> | Authorized officer KÖRBER, C. Telephone No. +49 89 2399 2278 |



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/SE00/01714

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-10 as published

Claims, No.:

1-13 as published

Drawings, sheets:

1/3-3/3 as published

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/SE00/01714

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | |
|-------------------------------|------------------|
| Novelty (N) | Yes: Claims 1-13 |
| | No: Claims |
| Inventive step (IS) | Yes: Claims |
| | No: Claims 1-13 |
| Industrial applicability (IA) | Yes: Claims 1-13 |
| | No: Claims |

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following document cited in the ISR:

D1: WO-A-9 625 977.

- 2.1 Document D1 which is considered to represent the most relevant state of the art, discloses (cf. Figs. 3 and 6; p. 10, penultimate paragraph; p. 12, l. 2-6) a heart stimulator from which the subject-matter of claim 1 differs in that it comprises averaging means provided to form an **average** amplitude value of the evoked response signal.
- 2.2 As D1 already teaches to distinguish between fusion beats and completely stimulated capture from an analysis of the amplitude values, it cannot be considered inventive to base this distinction on an average of the amplitude values, particularly since this is already known as acknowledged in the description (p. 5, l. 5-11) of the present application.
- 2.3 Dependent claims 2-13 do not appear to add anything inventive to claim 1. The features of claims 2-5, 9 and 11 are standard practice (cf. also p. 7, l. 7-15 of the description of the present application). The features of claims 6-8 and 12 are known from D1 (Fig. 4 and p. 8, l. 16). Nothing inventive can be recognized in the additional features of claims 10 and 13.

Re Item VII

Certain defects in the international application

1. Independent claim is not correctly delimited against D1 in accordance with Rule 6.3(b) PCT, with those features known in combination from D1 being placed in the preamble (Rule 6.3(b)(i) PCT).
2. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/SE00/01714

disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.